Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Review of the Section 251 Unbundling Obligations for Incumbent Local Exchange Carriers	CC Docket No. 01-338
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	CC Docket No. 96-98
Deployment of Wireline Services Offering Advanced Telecommunications Capability	CC Docket No. 98-147

COMMENTS ON PETITIONS FOR RECONSIDERATION

Catena Networks, Inc. ("Catena"), a manufacturer of technology that provides broadband access using wireline facilities, hereby comments on several of the petitions for reconsideration of broadband issues in the Commission's decision concerning the unbundling obligations of the Incumbent Local Exchange Carriers ("ILECs").[1] As a general matter, Catena believes the Commission adopted the proper overarching policies with respect to broadband in the *Triennial Review Order* when it removed many of the unbundling obligations in order to eliminate disincentives for new investment and spur the deployment of advanced services. Some additional modifications to the *Triennial Review Order* are necessary, however, in order fully to achieve these beneficial policies.

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[1] *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, FCC 03-36, released August 21, 2003 ("*Triennial Review Order*").

I. Introduction and Summary

Not all of the changes suggested in the reconsideration petitions will further the important goal of fostering broadband deployment adopted by the Commission in the *Triennial Review Order*. As explained herein, EarthLink, Inc. ("EarthLink") seeks reconsideration of the elimination of "line sharing" as an unbundled network element, and Catena opposes that request. The Commission correctly determined that carriers would not be impaired without access to line sharing as a UNE. On the other hand, BellSouth, SureWest Communications ("SureWest") and the US Internet Industry Association ("USIIA") seek reconsideration or clarification of limited portions of the *Triennial Review Order* broadband rules in order to further reduce some of the broadband unbundling obligations, and Catena supports those requests for relief. Such action will facilitate the availability of broadband services to all Americans.

Catena has a strong interest in the elimination of the investment disincentives to deployment of broadband equipment, and thus actively participated in this proceeding and the predecessor rulemakings.[2] As Catena has experienced, uncertainty and the threat of unbundling at non-compensatory prices that are based on hypothetical, incremental costs has stifled investment by the ILECs in advanced services technology. The Commission addressed this problem in the *Triennial Review Order* by holding that: (1) line sharing as a separate unbundled network element would be eliminated, subject to

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[2] *See, e.g.,* Comments of Catena in CC Docket No. 98-147, filed October 12, 2000; Reply Comments of Catena in CC Docket No. 98-147, filed November 14, 2000; Comments of Catena in CC Docket No. 98-147, filed February 27, 2001; Comments of Catena filed in WC Docket No. 01-338, filed April 5, 2002; Comments of Catena in WC Docket No. 01-338, filed July 17, 2002. In addition, Catena has engaged in over 30 *ex parte* meetings with the Commission.

grandfathering of current customers and a transition for new customers; (2) unbundling of broadband capabilities would be reduced or eliminated for customers served by fiber loops; and (3) packet switching would not have to be unbundled (although some Time Division Multiplexing (TDM) capabilities would have to continue to be unbundled).

These steps in furtherance of the Commission's broadband policies should help facilitate ILEC investment in new technologies, and indeed Catena has observed some additional investment has occurred since these new policies were adopted. Clearly the Commission should reject EarthLink's request, because it will be a retreat from this progress. In contrast, the refinements suggested by BellSouth, SureWest and USIIA will ensure that the benefits of broadband deployment are not withheld from certain customers as a result of arbitrary disincentives created by the specific rule language adopted by the Commission. The relatively minor changes proposed by these parties will ensure that subscribers in multi-dwelling units (MDUs) will not be denied the manifold benefits of broadband services. In addition, the suggested changes will ensure that the ILECs' decision to deploy certain advanced services architectures will be determined by the economics and engineering of the available technologies, and not be artificially constrained by regulatory fiat.

II. **The Commission Should Reject the EarthLink Petition for Reconsideration**

EarthLink requests that the Commission reconsider its decision to eliminate line sharing as a UNE, contending that the elimination of line sharing will eliminate all but the ILECs as wholesale providers of broadband transport for Internet access. EarthLink's desire for cheap wholesale broadband access service ignores the "impairment" requirement incorporated in the 1996 Act by Congress, the "impairment" standard

adopted by the Commission in the *Triennial Review Order* (after "prompting by the Courts), and the record and marketplace evidence that establishes that "line sharing" does not have to be unbundled as a separate network element (priced at TELRIC rates) in order for broadband competition to flourish. The Commission properly concluded that carriers were not impaired without access to line sharing of the high frequency portion of a loop as an unbundled network element.[3]

Moreover, notwithstanding the absence of impairment, the Commission established an exceedingly generous transition plan, with a three year phase-in for escalating the costs for a loop for "new" customers (*i.e.,* DSL customers acquired after October 2, 2003, the effective date of the new rules), and a "grandfathering" of customers acquired before the October 2, 2003 effective date at the same rate in effect prior to the change in rules. This "grandfathering" with no rate increase for "old" customers will continue for an indeterminate period -- at least until the next biennial review is concluded, and that proceeding will not commence until 2004.[4]

In determining that requesting carriers were not impaired without access to line sharing as a UNE, the Commission correctly found that a carrier's access to the loop would enable the carrier, on its own (providing both voice and data), or through line splitting, to be able economically to provide DSL services. The Commission properly concluded that its earlier assessment of the economics of DSL service was no longer

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[3] *Triennial Review Order* at ¶¶ 255-269.

[4] *Triennial Review Order* at ¶ 264. See also, Covad Press Release (Aug. 22, 2003; http://www.covad.com/companyinfo/pressroom/pr_2003/082203_press.shtml)("All Covad line-shared customers obtained as of the effective date of the order will be grandfathered indefinitely at current rates, terms and conditions.").

accurate. Indeed, the Commission's finding as to the availability of line splitting by competitive DSL providers has been reinforced by events subsequent to the release of the *Triennial Review Order*. Covad -- the leading national broadband service provider of high-speed Internet and network access utilizing DSL technology -- has announced additional line splitting deals.[5]

EarthLink claims that the Commission lacks authority to require that competitive carriers offer a bundle of services "in order to compete in the mass market broadband transport market."[6] The Commission, however, is not mandating that competitive carriers bundle services or adopt a particular business model – rather, the Commission, in assessing whether there is impairment without access to line sharing as a UNE, examined whether a requesting carrier has access to alternatives (in this case unbundled loops, and line splitting where a data carrier does not want to offer voice service), and determined that such alternatives are available and economical. Whether a particular competitive carrier avails itself of those alternatives is not relevant to the assessment of whether carriers in general would be impaired without access to line sharing as a UNE. Under EarthLink's analysis, if a single competitive carrier selected a business model that did not

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[5] *E.g.,* Press Release, "Covad Extends Partnership with MCI" (September 2, 2003)**(**http://www.covad.com/companyinfo/pressroom/pr_2003/090203_press.shtml**);** Press Release, "Covad Partners with AT&T to Offer Bundled DSL and Voice Services in Four More States" (September 11, 2003) **(**http://www.covad.com/companyinfo/pressroom/pr_2003/091103_press.shtml**);** TelephonyOnline.com, "Covad signs line-splitting deal with Z-Tel" (August 7, 2003) (http://telephonyonline.com/ar/telecom_covad_signs_linesplitting/). Indeed, Covad recently indicated it has expanded its dealings with EarthLink to cover 65 new markets. "Covad Partners with Earthlink to Expand Small Office DSL Service to 65 New Markets," Press Release (October 20, 2003) (http://www.covad.com/companyinfo/pressroom/pr_2003/102003_press.shtml).

[6] EarthLink Petition at p. 5.

use the alternatives, then "impairment" would still exist no matter how abundant and economical the alternatives were.[7] Such an "impairment" analysis would not comport with the Courts' directions to provide meaningful limits to unbundling under the statute's impairment standard.[8] Nor does EarthLink's analysis recognize that the ILECs are not even the predominant providers of broadband access services.

In addition, as the Court and the Commission acknowledge, unbundling itself imposes costs and impedes competition, and that is particularly true in the case of line sharing. As Catena explained in the context of the Commission's proceeding on remote terminal collocation, line sharing with use of a POTS splitter introduces inefficiencies in the use of the bandwidth of the loop (by foreclosing use of full-frequency spectrum splitterless technology) and greatly complicates test access.[9] As EarthLink also acknowledges, line sharing raises insoluble problems with regard to regulatory determinations for allocating the cost of the loops among multiple services,[10] and the resulting uncertainty and/or errant price signals dampen investment incentives and distort competition. These factors reinforce the Commission's conclusion that line sharing of

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[7] As a hypothetical analogy, consider the situation where an incumbent transport company provides both passenger and package delivery using a fleet of cars (with passengers carried in the car and packages in the trunk) -- under EarthLink's theory, the Commission would find that a competing carrier that desired only to deliver packages was impaired without access to the "trunks only" of the incumbent's cars, even where "whole" cars were available to competing carriers from the incumbent, and there were competing carriers willing to provide passenger service in partnership with companies that desired only to provide package delivery services.

[8] *Triennial Review Order* at ¶ 256, citing *USTA v. FCC*, 290 F.3d 415, 429 (D.C. Cir. 2002) and *Iowa Utilities Board v. FCC*, 525 U.S. 366, 386-88 (1998).

[9] For a detailed discussion of these issues, *see* Comments of Catena in CC Docket No. 98-147, filed December 12, 2000 at pp. 12-19.

the high frequency portion of the loop should not be unbundled as a separate network element.

Finally, EarthLink challenges the irregular procedures that led to the adoption of the *Triennial Review Order*, thus tainting the decision to eliminate (subject to a transition) line sharing as a UNE. While Catena certainly does not endorse the Commission's taking six months for release of the text of an order, there is no evidence that EarthLink or the line sharing issue was discriminatorily prejudiced by the delay. The record reflects that contacts with the Commission occurred during that period, but as far as Catena is aware, those contacts were consistent with the Commission's *ex parte* rules, and apparently included meetings or conversations from both ILEC representatives and competitive DSL representatives. Moreover, as discussed above, the Commission's decision to eliminate line sharing as a separate UNE was consistent with the Court's directions, consistent with the impairment standard, fully supported by the record and reinforced by subsequent developments. For all of these reasons, the Commission should deny EarthLink's petition for reconsideration.

III. **The Commission Should Grant the Petitions for Reconsideration Filed by BellSouth, SureWest and USIIA**

In the *Triennial Review Order* (as supplemented by the September 17th *Errata*), the Commission took significant steps to eliminate ILEC disincentives for investment in broadband technologies, and Catena applauds that progress. Indeed, Catena has already observed a significant "uptick" in ILEC broadband investment and a greater interest in some of Catena's products, and general industry reports indicate that other manufacturers

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[10] EarthLink Petition at p. 12.

have also experienced increased demand for broadband equipment.[11] Not surprisingly, the marketplace has responded positively to the reduction in uncertainty as a result of the release of the *Triennial Review Order*, as well as that decision's removal of some of the broadband investment disincentives as a result of the reduction in fiber and packet switching unbundling. While these initial reactions are promising, BellSouth, SureWest and USIIA have identified some ways in which the *Triennial Review Order* fails to implement fully the broadband policies underlying that decision. Without the additional refinements suggested by those petitioners, many Americans will not enjoy the benefits of broadband services. Catena thus urges the Commission expeditiously to grant the reconsideration petitions filed by BellSouth, SureWest and USIIA.

As an initial matter, Catena urges the Commission to eliminate the disparate regulatory treatment of fiber-to-the-premises ("FTTP") and fiber-to-the-curb ("FTTC") architectures. As BellSouth explains, FTTC (defined as fiber deployed to a serving

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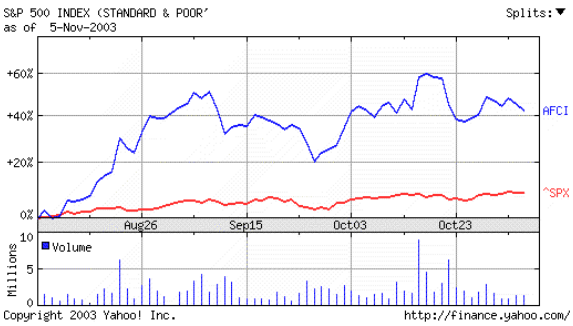
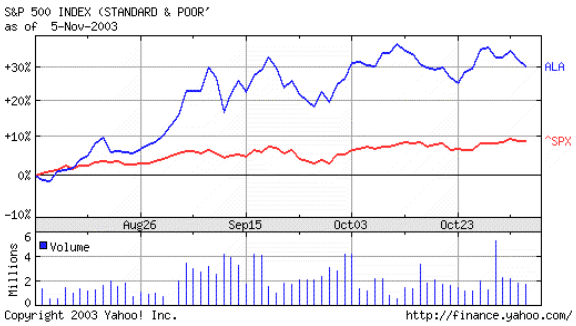
[11] *E.g.,* Adams Harkness & Hill, Communications Technology Industry Report – "The Return of a Networked World: Key Trends in Communications Equipment" (October 9, 2003) (http://www.ahh.com/files_and_pdfs/press_rel_pdfs/commtech%20industry%2010-9-03.pdf) at pp. 3, 5 and 6. Catena Networks has experienced exponential quarter over quarter revenue growth since the adoption of the *Triennial Review Order*. Catena's competitors have also experienced significant growth in valuation as a result of the adoption of the *Triennial Review Order*. The following charts show the recent growth in valuation for AFC and Alcatel [compared vs. S&P 500].



AFC



Alcatel

terminal within 500 feet of the premises) provides service equivalency to FTTP.[12] When the copper portion of the FTTC loop is within 500 feet of the customer premises, full high bandwidth (*i.e.*, virtually no attenuation) capabilities are supported, allowing the carrier to provide "triple play" services – voice, data and video. Indeed, competitive carriers today are providing all three services using FTTC technology.[13] Thus, in the Commission's impairment analysis -- which takes into consideration all of the revenue opportunities available to a competitive carrier if it were to deploy new technology -- there is no difference between the FTTP and FTTC service capabilities, and hence revenue opportunities.

FTTC is distinguishable from the broader "remote terminal" deployments, which typically support 9,000 feet serving areas and can support voice and DSL data services, but are limited from realizing full bandwidth service capacity due to loop length attenuation. While the Commission should (and does) foster the deployment of advanced services such as DSL through the reduction in unbundling of hybrid loops and packet switching,[14] the more extensive relief afforded to FTTP should be extended to FTTC so as to encourage carriers to invest in technology providing even greater capabilities. As

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[12] BellSouth Petition at pp. 3-6; BellSouth Ex Parte Submission in WC Docket No. 01-338, filed September 30, 2003.

[13] *E.g.,* Marconi Ex Parte Submission in WC Docket No. 01-338, filed September 26, 2003 at p. 7 (discussing activities of Grande Communications, Inc.).

[14] The *Triennial Review Order* does reduce the investment disincentives for fiber-fed remote terminals by eliminating some of the unbundling obligations for these "hybrid loops," although the relief for hybrid loops is not as extensive as that afforded to fiber-to-the-premises architectures.

the record demonstrates, the service capabilities of FTTP and FTTC are virtually indistinguishable.

With regard to the other impairment considerations considered by the Commission in the *Triennial Review Order*, FTTC and FTTP are also equivalent. For new deployments, the ILEC has no "first mover" advantage for either FTTC or FTTP, and in fact for both architectures the competitive carriers may have cost advantages as a result of their ability to utilize non-union labor. Likewise, in light of the service equivalency, the Section 706 command to facilitate advanced services is equally applicable to FTTP and FTTC. In sum, there is no valid basis for applying different unbundling obligations on these two fiber architectures.

Although the impairment analyses are the same, there are some distinctions between the two architectures that can affect a carrier's decision to deploy FTTC versus FTTP. The costs for deployment of the two technologies will vary in different situations for numerous reasons. For example, in the case of FTTP, each premise must install electronics for the optical/electrical conversions, whereas for FTTC the electronics for optical/electrical conversion are shared among the homes or offices sharing the pedestal (typically six to eight living units). Similarly, in order to ensure that lifeline services are available even when the power is out, a FTTP deployment requires each home or office to install backup battery equipment. For FTTC deployments, the backup electricity equipment can be shared among all of the homes or businesses served from the same pedestal.

Catena firmly believes that a carrier should decide which fiber architecture to deploy based on the technical and economic merits of FTTC and FTTP, not because of

the differing regulatory treatment that currently applies to these two architectures. The greater unbundling obligations presently imposed on FTTC distorts the marketplace decisions of carriers and contravenes the Congressional and Commission policy of technical neutrality.[15] Catena thus urges the Commission promptly to eliminate the differing unbundling requirements imposed on FTTC and FTTP consistent with BellSouth's petition for reconsideration.

BellSouth, SureWest and USIIA have identified other shortcomings with the *Triennial Review Order* that will adversely impact the Commission's goal of fostering the deployment of broadband services to all Americans. As discussed above, the Commission applies different unbundling obligations when fiber is deployed in the carrier's network, depending on whether the loop is considered a hybrid loop or a fiber-to-the-premises loop. For subscribers living in MDUs, apparently even in situations where the ILEC deploys fiber all the way to the building, the loop would be considered a hybrid loop (rather than FTTP), because in most deployments the carrier will utilize copper risers within the building to reach each of the apartments/condominiums or offices.

Such treatment makes no sense, however, because the services that can be provided to the subscriber are the same as if fiber were provided all the way to the apartments/condominiums or offices. Thus, the revenue opportunities are identical, so

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[15] *E.g.*, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 14 FCC Rcd 2398 (1999) at ¶ 74; *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 15 FCC Rcd 385 (1999) at ¶ 12; Telecommunications Act of 1996, § 706(c)(1) ("the term 'advanced telecommunications capability' is defined without regard to any transmission media or technology").

that the impairment analysis would find that for both FTTP and fiber-to-MDUs, the competitive carriers are not impaired without access to unbundling of the broadband capabilities. Likewise, in greenfield deployments, the ILEC has no "first mover" advantage or other cost advantage that would justify an unbundling obligation for the fiber when the ILEC is deploying fiber to an MDU.[16] Thus, the disparate treatment of fiber to an MDU and FTTP is unjustified.

By treating fiber to MDUs as a "hybrid loop" with greater unbundling obligations, however, the Commission preserves the disincentives to ILEC investment in new fiber-based technologies to these subscribers. As a result, many Americans will be denied access to advanced services. There is simply no valid basis for treating subscribers in MDUs as less deserving of broadband services. Moreover, such treatment is inconsistent with Section 706's directive to encourage the deployment of advanced services to all Americans. The Commission should therefore clarify that fiber to an MDU will be treated the same as FTTP.

BellSouth and SureWest also identify a problem created by the ambiguity of different unbundling obligations that apply to "mass market" as opposed to "enterprise" customers, which are not clearly defined terms. Such ambiguity serves as a disincentive to investment in new fiber-based technologies. The Commission can cure this problem by treating all FTTP deployments the same, regardless of the identity of the customer. Alternatively, the Commission must clearly define what constitutes an "enterprise" customer for these purposes.

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[16] With respect to any copper riser, if it is controlled by the ILEC, the CLEC will continue to have access to that sub-loop so that there is no impairment from lack of access to the fiber.

Finally, Catena agrees with BellSouth that the Commission must clarify that TDM capabilities need not be designed into next generation networks. As the network evolves to packet-based technologies, it makes no sense to require that manufacturers incorporate older or different technologies simply to fulfill an arbitrary regulatory mandate. As a manufacturer, Catena designs its products in the most efficient manner possible. Catena develops products for use by ILECs and CLECs alike, and it sees no benefit to designing one product for CLEC purposes (based on the most efficient design), and a second (less efficient and more complicated) version for the ILECs. Thus, the Commission should clarify that the requirement that the ILECs unbundle TDM capabilities is not a mandate that the ILECs deploy TDM capabilities where they otherwise would not do so, or a bar to the ILECs replacing older equipment with new technologies that do not include TDM capabilities.

In order to ensure that the *Triennial Review Order* does not retain unnecessary disincentives to investment in broadband technologies, Catena urges the Commission to grant the petitions for reconsideration filed by BellSouth, SureWest and USIIA. At the same time, Catena urges the Commission to resist EarthLink's request to reinstate line sharing. By taking these actions, the Commission will well serve the public interest and further Section 706's directive to facilitate advanced services to all Americans.

Respectfully submitted,

By _____/s/_____

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Dated: November 6, 2003